Department of Energy
Brookhaven Site Office
P.O. Box 5000
Upton, New York 11973

AUG 0 6 2004

Mr. Michael Bebon
Brookhaven Science Associates, LLC
Brookhaven National Laboratory
Upton, New York 11973

Dear Mr. Bebon:

SUBJECT: APPROVAL OF THE PROPOSED COLLIDER-ACCELERATOR DEPARTMENT ACCELERATOR SAFETY ENVELOPE (ASE) MODIFICATIONS

Reference: Letter, from T. Sheridan, BSA to M. Holland, BHSO, Recommendation for Approval of the Proposed C-AD Accelerator Safety Envelope Modifications, dated August 5, 2003.

The Brookhaven Site Office has completed reviewing the proposed ASE modifications for the:

- Tandem Van de Graaf/Tandem to Booster Transfer Line (TVDG/TTB)
- Alternating Gradient Synchrotron (AGS), Booster, and LINAC
- NASA Space Radiation Laboratory (NSRL)
- Relativistic Heavy Ion Collider (RHIC)

Based on our review, the above ASE modifications are approved. If you have any questions, please call Peter Kelley of my staff at extension 5784.

Sincerely,

M. Holland

Michael D. Holland
Brookhaven Site Manager

cc: D. Lowenstein, BSA
E. Lessard, BSA
R. Karol, BSA

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August 5, 2003

Mr. Michael D. Holland
Manager, Brookhaven Area Office
U.S. Department of Energy
Building 464
Upton, NY 11973

Subject: Recommendation for Approval of the Proposed C-AD Accelerator Safety Envelope (ASE) Modifications

Dear Mr. Holland:

Attached for your review and approval are proposed modifications to the BNL Collider-Accelerator Department's Accelerator Safety Envelope which includes 1) Tandem Van de Graaff/Tandem to Booster Transfer Line (TVDG/TTB) ASE; 2) Alternating Gradient Synchrotron (AGS), Booster and Linac ASE; 3) NASA Space Radiation Laboratory (NSRL) ASE; and 4) Relativistic Heavy Ion Collider (RHIC) ASE. A memo provided by the Laboratory Environment, Safety & Health Committee (LESHC) supporting this request for approval is attached.

If you have any questions, please contact Ed Lessard on X4250.

Sincerely yours,

Thomas R. Sheridan
Deputy Director, Operations

TRS/lim

Attachment:
Memo dated 7/18/03, E. Lessard (LESHC Chair) to T. Sheridan

cc: M. Butler
E. Lessard
D. Lowenstein ✓
S. Ozaki

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Date: *July 18, 2003*

To: *T. Sheridan, Deputy Director for Operations*

From: *E. Lessard, Chair, BNL Environment, Safety and Health Committee* ETL

Subject: LESHC 03-02, Recommendation for Approval of the Proposed C-A Department's Accelerator Safety Envelope (ASE) Modifications

The BNL ES&H Committee has reviewed the proposed modifications to the Collider-Accelerator Department's active ASEs. They include:

1) Tandem Van de Graaff/Tandem to Booster Transfer Line (TVDG/TTB) ASE
2) Alternating Gradient Synchrotron (AGS), Booster and Linac ASE
3) NASA Space Radiation Laboratory (NSRL) ASE
4) Relativistic Heavy Ion Collider (RHIC) ASE

In our meeting of June 5, 2003, the Committee raised several questions during the course of the review. The C-AD staff addressed all of our questions satisfactorily.

The Meeting Minutes are attached for your information. In summary, the ASEs were revised using the draft DOE Accelerator Safety Guide, as supplemented with the DOE guidance for reactor Technical Safety Requirements, particularly for non radiation hazards, emergency actions, authorized alternatives, and surveillance interval extension allowances. The following lists the major revisions to the four ASEs:

1) The ASEs were reformatted to conform with the SBMS Accelerator Safety requirements
2) For uncontrolled areas and adjacent non-C-AD facilities, several ASEs used the DOE 100 mrem annual dose limit. The BNL administrative control limit of 25 mrem in one year is now specified in all ASEs
3) The RHIC ASE was modified to remove the detailed ODH requirements and a commitment to satisfy the SBMS ODH requirements was inserted
4) Environmental requirements for control of groundwater contamination and airborne release were clarified and made consistent among the ASEs
5) The Experimental Review requirement was added to all ASEs
6) A commitment to control industrial hazards in accord with SBMS requirements was added to all ASEs
7) The use of "Authorized Alternatives," to be implemented if an ASE requirement is not met, has been added where appropriate in all of the ASEs. This concept, as it applied to C-AD fire protection systems, was reviewed and approved in LESHC Meeting 03-01
8) A 25% extension allowance on surveillance intervals was added

9) Guidance on ESH emergency actions that depart from ASE requirements was added to all ASEs.

By unanimous vote, the Committee recommends your approval of these documents, subject to the following four conditions. The Collider-Accelerator Department (C-AD) will:

1) Present a critique to their departmental management whenever an authorized alternative is exercised
2) Determine if the proposed 25% extension allowance for surveillances is appropriate for radiation monitoring equipment – **Complete**[1]
3) Modify Section 2 of each ASE to explicitly state the tritium and sodium-22 concentration limits as 5% of the Drinking Water Standard and to reference the Accelerator Safety Subject Area, "Design Practice for Known Beam Loss Locations" – **Complete**[1]
4) Provide an information copy of the operating procedure to the LESHC in parallel with the ASE approval process

Copy to (via Email):

Committee Members
S. Hoey
R. Karol
P. Kelley (BAO)
D. Lowenstein
Y. Makdisi
T. Monahan
J. Tarpinian

[1] Please note that conditions 2 and 3 have been completed in the interim between our June 5th meeting and the date of this letter.